

Developing Farm Food Products in Virginia

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Director, Food Innovations Program

Before Starting Business

- **Check Zoning Laws!**

- May not be able to conduct business as you wish
- Make sure you are zoned for business activities
- Some towns/cities/counties do not allow home-based or farm-based value-added businesses

Plan Your Business: Needed for Product Development Assistance

- Develop a business plan
 - Needed for product development assistance
- Write a marketing plan
 - Where to sell
 - How to advertise
 - Who to target
- Check on your competition
- Consider current trends

2017 Trends

- Going local/artisanal – great for specialty foods! (Replacing organic importance in some markets.)
- Green/Eco-friendly
- Alternate Proteins
- Gluten-free
- Fermented/Brined/Pickled Foods
- Healthy Definition Change
 - Low Calorie/Heart Healthy
 - Fresh
 - Simple Ingredients
 - Humane/Sustainable
- On-the-go Healthy
- Produce hybrids
- No or low alcohol drinks



Product Development Success

- **Developing product that fits your mission – be comfortable with your product!**
- Keeping focus on products
- Performing market analysis – need not to be fancy
 - Size of market
 - Growth rate of market
 - Barriers to entry into and exit from market
 - Competitors
 - “Me too” concept
- Understanding demographic of your consumer
- Providing specific consumer benefit
- Fulfilling customer expectations

Product Development Stages

- Idea Stage
- Development Stage
- Consumer Testing Stage
- Packaging Stage
- Shelf-life Testing Stage
- Final Production Stage
- Test Marketing Stage
- Commercialization Stage

Product Development Stages:

Idea Stage

- Type of Product
- Target Audience
- Competition
- Demand
- Price of Product
 - Cost of Manufacturing of Product (facility, utilities, ingredients, packaging, licensing and governmental fees)
 - Other Indirect Costs (advertising, phones, postage, transportation, insurance)

Product Development Stages:

Development Stage

- Can be long arduous stage
- Creation of the new product
- Standardize Recipe
- Address Issues:
 - **Safety**
 - **Stability**
 - **Quality**
 - **Regulatory**

Recipe Standardization

- Multiplying ingredients to make larger batch may not work
 - Convert all ingredients to weight measurement
 - Weigh on your own - best
 - www.gourmetsleuth.com has calculator
 - Multiply to get desired batch size
 - Experimental additions or subtractions may be necessary
 - Jams and jellies notoriously do not “scale-up”
- Experiment with cost cutting measures *before* standardization if possible

Recipe Standardization

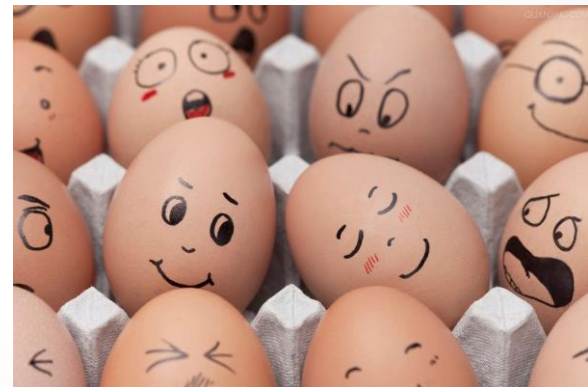
- Understand that brand substitution of ingredients may greatly affect product including flavor, shelf-life stability and safety parameters
- After standardizing recipe, make product multiple times to determine repeatability
- Streamline work station to develop most effective way of producing product using most effective equipment
- Take *meticulous* notes at every step

Who Regulates What?

- U.S. Dept. of Agriculture (USDA) - Production and distribution of meat and poultry (2% or greater cooked /3% or greater raw)
- U.S. Food and Drug Administration (FDA) - Production and distribution of all other non-meat packaged food
- States/local governments
 - Virginia Department of Agriculture (VDACS)
 - Inspection program considered “at least equal to” USDA (meat) and FDA (non-meat) inspection programs
 - Virginia Department of Health (VDH)
 - Local jurisdictions may have more stringent codes

Regulatory Scramble: Who Inspects Eggs?

- FDA/VDACS Office of Dairy and Foods
 - Eggs in shell
 - Chicken feed
- USDA/Office of Meat and Poultry
 - Liquid, frozen and dehydrated egg products
 - Laying facility
 - Bird and meat of bird



A Word About the Incredible Edible Egg....

Virginia Egg Laws and Rules

*The term "fresh eggs," or any legend, symbol, picture, representation or device declaring or tending to convey the impression that the eggs are fresh may be applied only to eggs meeting the requirements of **grade A quality or better** as established by the Board for fresh eggs.*

- ***Grades have nothing to do with food safety, this is a marketing service***
- Certain heirloom breed chicken eggs, duck and quail eggs do not grade well



A Word (or two) About the Egg....

- When Selling Eggs:
 - Inside carton air must be 45°F or below
 - Recommend using cooler with white lid
 - Recommend using thermometer and keep records
 - Can re-use cartons – must obliterate grading information if eggs are not graded
 - Label must include:
 - ✓ Egg Type
 - ✓ Count
 - ✓ Producer and producer address
 - ✓ Pack Date
 - ✓ Safe handling instructions (can keep from re-used carton)

Who Regulates What: VA Department of Agriculture and Consumer Services (VDACS)

- Food Manufacturers (Packaged Products)
- Commercial
- Home/Farmstead Producers
- Food Warehouses
- Supermarkets and Convenience Stores
- Seafood markets
- Bakeries
- Farmer's Markets Vendors

Who Regulates What: VA Department of Health (VDH)

- Restaurants
- Catering Operation
 - Trucks and mobile units
- Carts and mobile units
- Bed and Breakfasts
- Delis (Not attached to Store)
- Convenience Store Delis
 - Greater than 15 seats
 - Associated with a national chain
- Farmer's Markets (Usually only inspect mobile units and foods needing temperature control for safety)

Home-based Kitchens or Separate Commercial Kitchen?

- VDACS
 - Allows home-based businesses
 - **Pets must be excluded by doors on kitchen and storage areas (Keeping pets in closed rooms will not satisfy requirement)**
 - Does not allow home kitchens to be used for dairy product or meat products manufacturing
 - Facility must be separate facility from home kitchen
- VDH
 - **Does not allow home-based businesses**
 - Must be separate facility from homeowner's kitchen

VDACS Resources

vdacs.virginia.gov

Inspection Services (Regulatory)

- Office of Food Safety and Inspection
 - Assists in facility planning and layout
 - Authorizes facility for food processing
 - Enforces food regulations
 - Divisions include:
 - Office of Dairy and Foods (FDA-regulated products)
 - Office of Meat and Poultry (USDA- regulated products)
 - Consumer Affairs
- Office of Plant Industry Services – Animal Feed , Pet Treats, Seeds, Ginseng, Hops, Beekeeping



VDACS Resources

Office of Marketing Services

- Virginia's Finest Trademark Program
- Virginia Grown Program – direct marketing support program for growers
- Marketing Board News
- Trade Event Notification
- Grading Services
- Connecting with Food Distributors




Office of Dairy and Foods Information




vdacs.virginia.gov

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HOME & COMMERCIAL KITCHEN-BASED BUSINESSES & FOOD SERVICE VENDORS

Food establishments, including private homes, that manufacture, process, pack or hold food for sale are subject to the Virginia Food Laws and related regulations. It is unlawful to operate a food business until it has been inspected. (Note these exceptions from inspection.)

Enforcement of these requirements includes regular periodic inspections of food establishments, including private homes. VDACS' Food Safety Specialists, also known as inspectors, ensure that any food or beverage manufactured, produced, processed, packed, exposed, offered, possessed or held for sale is safe for human consumption, and in compliance with the Virginia Food Laws and related regulations. Inspectors look for evidence of unsanitary conditions, mislabeling and the mishandling of food products that can lead to unsafe foods. Manufacturers are subject to unannounced inspections and sampling, as well as an annual fee. See these frequently asked questions.

Catering is not permitted from a home-based kitchen. If you are interested in starting a catering company, please contact the Virginia Department of Health. Products containing meat are regulated by the Office of Meat and Poultry Services.

Applications

- [Application for a Home Food Processing Operation \(pdf\)](#)
- [Farmer Market Food Service Vendor Application \(pdf\)](#)

Laws & Regulations

- [Virginia Food Laws](#)
- [Virginia's Home Kitchen Food Processing Exemptions \(pdf\)](#)
- [FDA: Good Manufacturing Practices Regulations](#)
- [FDA: Labeling Regulations](#)
- [FDA: Specialized Laws & Regulations](#)

Additional Resources

- [Frequently Asked Questions: Food Safety Program Annual Fees](#)
- [Food Innovations Program at Virginia Tech](#)
- [Food & Drug Administration](#)
- [Virginia's Finest Program](#)

Contact

Northern Virginia

(North of Richmond, includes

Southwest Virginia

(Includes Harrisonburg and Front Royal, Virginia


Richmond & Tidewater

Office of Meat and Poultry Information

vdacs.virginia.gov

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MEAT & POULTRY SERVICES

In cooperation with the U.S. Department of Agriculture, the Office of Meat and Poultry Services administers meat and poultry inspection laws and regulations designed to provide and maintain a safe, unadulterated, wholesome and accurately labeled meat and poultry supply.

The office oversees the process of converting farm-raised animals into food products, which includes raw products such as ground meat as well as cooked products such as Brunswick stew. Inspection services are available to individuals or companies that slaughter and/or process meat and poultry products.

Resources

- [Meat & Poultry Services Forms](#)
- [USDA Food Safety & Inspection Service](#)

Publications

- [A Guide to Virginia's Meat & Poultry Inspection Program \(pdf\)](#)
- [Directory of Establishments \(pdf\)](#)
- [How to Obtain State Meat & Poultry Inspection \(pdf\)](#)
- [Establishment Design & Construction Guidebook \(pdf\)](#)
- [Requirements for a Custom Permit \(pdf\)](#)
- [Guidance for Determining Whether a Poultry Operation is Exempt from Inspection \(pdf\)](#)

Laws & Regulations

- [Virginia Meat & Poultry Inspection Act](#)
- [Virginia Meat & Poultry Inspection Regulations](#)

Contact

Barry Jones

Office of Meat and Poultry Inspection

804.786.4569

barry.jones@vdacs.virginia.gov

[Click here](#) for Division of Animal and Food Industry Services contact information.

[Click here](#) to submit a complaint concerning foodborne illness, or conditions at a food manufacturer or retail store.



Marketing Information



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What Does the Exemption Mean??

- Inspection exemption does not mean exemption from regulations
- All state and federal food laws must be followed
- Not exempt from labeling
- Not exempt from federal inspection



Office of Dairy and Foods Inspection Exemption

- Exempt from State Inspection
- Private home where resident is processing specific food products (no meat, poultry or dairy)
 - Sold to directly to consumers for their own consumption and **not for resale**
 - Sold at the private home or at farmer's markets
 - **Labeled “NOT FOR RESALE – PROCESSED AND PREPARED WITHOUT STATE INSPECTION”**
 - Cannot be sold to other establishments (wholesale or retail) or on internet

Office of Meat and Poultry Exemptions

- Custom Exemption
 - Owner of the livestock or poultry slaughter for own use or for use by members of his household or nonpaying guests
 - Cannot be sold
 - Must be marked “NOT FOR SALE”
 - Custom Permit – custom slaughtering animals owned by others
 - Cannot cross state lines
- No meat (other than poultry) can be sold without inspection.

Office of Meat and Poultry Exemptions

- Poultry Exemption
 - Poultry can be sold
 - ***FDA Food Code requires poultry sold at retail stores and prepared in restaurants to come from an approved source***
 - Basic sanitary requirements must be met
 - Selling direct to consumer:
 - 1,000 birds up to 20,000 birds/year must apply for Poultry Permit of Exemption
 - Less than 1,000 birds permit may not be needed
 - Must maintain records
 - Selling to restaurants, hotels, or boarding houses
 - Must apply for Poultry Permit of Exemption
 - No more than 20,000 birds/year
 - Must maintain records
 - Cannot cross state lines

Label Requirements

- Does My Food Need a Label?
 - Required:
 - Product Name on Front Label
 - Accurate, **Bold, Largest Type**
 - Net Weight
 - US and Metric (ex: ounces and grams)
 - Ingredient Statement
 - Listed in order of predominance based on weight
 - Name and Address of Manufacturer, Distributor, or Packer
 - No PO Box, Email address cannot substitute actual address
 - Nutrition Facts Information



Allergen Labeling

- Labeling Allergens

Food Allergen Labeling and Nutrition Labeling Act of 2004

- Requires use of common English names for the major food allergens (Milk, Eggs, Fish, Crustacean Shellfish, Tree nuts, Peanuts, Soy, Wheat)
 - Tree nuts - identify specific nut such as “almond,” “pecan,” “walnut”
 - Fish/Shellfish must identify species, such as “tuna,” “bass,” “flounder,” “shrimp,” “lobster”
- Requires labeling for flavors, colors, and incidental additives if contain allergens
- No minimum level of allergen required for labeling

Nutritional Label

Nutrition Facts Information **Exemption** for Small Business

- Applies to retailers with annual gross sales of not more than \$500,000, or with annual gross sales of foods or dietary supplements to consumers of not more than \$50,000
- Applies if the company has less than 10 employees and sells less than 10,000 units
 - No notice needed to be filed with FDA
- Applies if the person claiming the exemption employs fewer than an average of 100 full-time equivalent employees and fewer than 100,000 units of that product are sold in the United States in a 12-month period.
 - Notice must be filed annually with FDA
- **If making any nutritional claim, exemption is void no matter the size of business.**

Record Requirements (Bioterrorism and Safety)

Records must be retained for:

- 6 months for foods with shelf life of 60 days or less
 - 1 year for foods with shelf life of 60 days to 6 months
 - 2 years for foods with shelf life of over 6 months
 - 1 year for animal feeds and pet food
- Records must be made available “as soon as possible, not to exceed 24 hours from the time of receipt of original request of regulatory agency
- Records needed for Immediate Previous Source (one upstream) and Immediate Subsequent Receiver (one downstream)

Immediate Previous Source

Means that you have to know where the product came from.

- **Receiving Records**

- Purchase orders
- Shipping documents
- Invoices
- Receipts

- **Ingredient Information**

- Lot codes
- Other Receiving documents (date, amount)
- Condition of receipt

Immediate Subsequent

Means that you have to know where the product went.

- ***Batch codes important***

Virginia Department of Health (VDH)

www.vdh.virginia.gov

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Ebola:
Information for
Health Care Professionals,
First Responders and Others

[Seasonal Flu](#)

[Ebola](#) **Hotline: 1-877-275-8343**
1-877-ASK-VDH3

[Ebola: Health Care Professionals](#)

Local Health Districts: Locations by Region/County, District Directors, Contact Information, Hours of Operation...

Healthy Living: Nutrition, WIC, Dental, Chronic Disease Prevention, Injury and Violence Prevention, Infant Mortality...

Emergency Preparedness: Severe Weather, Agents & Threats, Diseases, VA MRC...

Environmental Health: Restaurant Inspections, Sewage & Water Services, Food Safety, Lead, Shellfish Sanitation...


Birth, Death & Marriage Certificates: Division of Vital Records and Health Statistics...


Diseases & Conditions: Rabies, AIDS Programs, Tuberculosis, STDs, Immunizations, Virginia Immunization Information System (VIIS)...

Health Equity: Minority Health, Rural Health, Primary Care, Cultural and Linguistic Competency...

Licensure and Certification: Nursing Facilities, Medical Facilities and Services, Certificate of Public Need (COPN)...

Drinking Water: Waterworks Owners, Operators, Laboratories, Consumers...

Message from the State Health Commissioner


Take Precautions in Extreme Cold Weather
As temperatures are predicted to fall into the single digits during the next several days, VDH encourages everyone to


[Home](#) > [OEHS](#) > Food and General Environmental Services

Food and General Environmental Services

The Virginia Department of Health and the Food and General Environmental Services maintain several roles in attempting to control for and prevent the occurrence of foodborne diseases, including: performing surveillance activities for various reportable conditions, investigating reportable disease occurrences, including outbreaks; and inspecting restaurants.



According to the Centers for Disease Control and Prevention (CDC), foodborne disease in the U.S. affects an estimated 48 million persons.

[Food Safety](#)[Bedding & Upholstery](#)[Milk Safety](#)[Childhood Lead Poisoning Prevention](#)[Regulations](#)[Links](#)[PIMS](#)[EH Calendar](#)

Quick Links

[Restaurant Inspections](#)
[Recalls affecting Virginia](#)
[FDA Recalls](#)
[USDA Recalls](#)[E-mail This Page](#)

Last Updated: 03-05-2015

Who needs to apply for a permit to operate?

- Any person who owns, establishes, conducts, maintains, manages, or operates any food establishment being regulated by VDH.
- Permits are not transferable from one person or location to another (exception possible for mobile units attached to fixed location)
- ***Virginia Department of Health has no inspection exemptions***

VDH Responsibilities

- **Issue Permit to Operate at State/Local Level**
- **As condition of holding permit:**
 - **Must submit to regular evaluations by issuer**
 - **Must comply with local/state regulations**
 - **Report to health dept. if suspect outbreak**
- **Provide education or direct to resources**
- **Notify if conditions arise that could affect operation**
- **Initiate enforcement**

Food Safety: Principles of Controlling Bacteria

- Control bacteria
 - ✓ Inhibit growth of bacteria
 - ✓ Prevent or reduce number of bacteria
- Eliminate bacteria
 - ✓ Heat
 - ✓ Filtration

Safety Considerations: What Bacteria Need to Grow

- **F**ood
- **A**cidty
- **T**emperature
- **T**ime
- **O**xygen
- **M**oisture



FIGHT BAC!

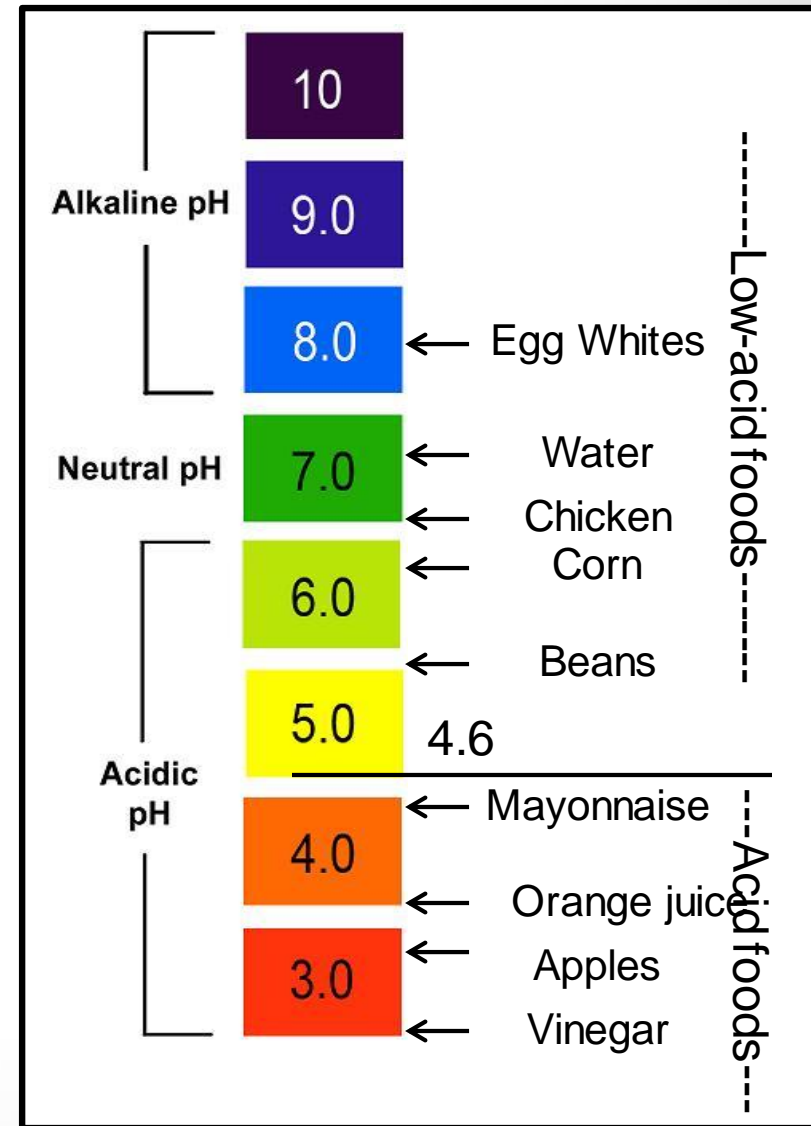
Safety Considerations: What Bacteria Need to Grow

❖ Acidity

pH= measure of amount of acid
Less than 4.6 important

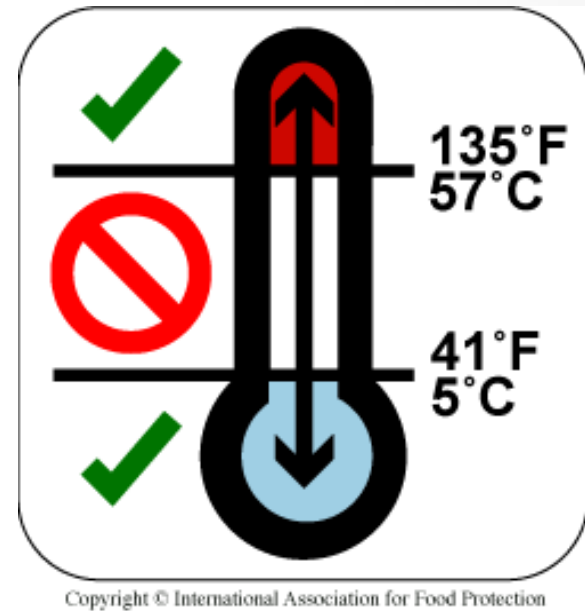
Acidity Control is found in:

- Pickled products
- Salad dressings
- Condiments
- Fermented products



What Bacteria Need to Grow

- **F**ood
- **A**cidty
- **T**emperature
 - Danger zone = 41°F to 135°F
- **T**ime
 - No more than four hours in danger zone
- **O**xygen
- **M**oisture



What Bacteria Need to Grow

- **F**ood
 - **A**cidity
 - **T**emperature
 - **T**ime
 - **Oxygen**
 - **Aerobic: most spoilage organisms**
 - **Facultative anaerobic: harmful bacteria**
 - **Anaerobic: *Clostridium botulinum* (botulism)**
 - **M**oisture
- Different microorganisms need different oxygen levels in order to grow
 - Aerobic: Need oxygen
Ex: mold and spoilage
 - Anaerobic: Need complete absences of oxygen
Ex: *Clostridium botulinum*
 - Facultative anaerobic: low oxygen levels, only 5%
Ex: Foodborne pathogens

Botulism: Not Just for Canned Foods Anymore

- Foil-wrapped baked potatoes left to cool at room temperature
- Dry-cured sausage improperly cured
- Garlic-in-oil mixtures, herb /oil mixes left at room temperature
- Canned quick breads (baked in closed can)
- Vacuum packed products that have no other food safety control

What Bacteria Need to Grow

Water Activity (a_w)

- **F**ood
- **A**cidity
- **T**emperature
- **T**ime
- **O**xygen
- **M**oisture
 - Available water for microorganisms to grow, not total moisture
 - Bacteria like more moisture than molds
 - Water can be bound or made unavailable – lowers water activity
 - Sugar
 - Salt – 6x more effective than sugar

Understanding Your Food

- Food
- Acidity
- Time
- Temperature
- Oxygen

❖ Moisture



Common ways to lower
water activity:

- **Salt addition**
- **Sugar addition**
- **Dehydration**
- **Boiling off water**



Understanding Your Food

- How are you supposed to know? Get your food tested!
 - pH
 - Water activity
 - Classification and regulations
 - Scheduled process



Food Innovations Program

<http://ext.vt.edu/food-health/food-innovations.html>

- Provide testing of food products for safety and quality
- Act as process authority for acidified foods (accepted by FDA, USDA, VDH and VDACS)
- Provide guidance on reformulation and product design
- Provide technical guidance on safety and regulatory issues governing food products
- Assist with compliance with regulatory agencies
- Nutritional fact panel calculation services
- Conduct workshops

Food Innovations Program

Service We Do Not Provide

- Process Authority Evaluation for low-acid foods
- Nutritional Testing
- Allergen Testing (including Gluten)
- Complete Product Development – cannot develop recipes or complete processes
 - Must go through Department of Food Science and Technology as field trial
 - Must have faculty sign-off
 - Must go through university intellectual property agreement



Food Innovations Program

The Food Innovations Program goal is to provide the assistance needed for Virginia's food processing industry to produce high quality, safe, and innovative food products. We strive to increase the awareness of Virginia's food producers to matters of food safety, pertinent food regulations, and general concerns associated with starting a food business.

What's New

Resources

FAQs

Additional Links

Academics

Facilities

FDA establishes definition for "gluten free" foods.

The FDA has determined that a food may be labeled as "gluten free" if it contains 20 parts per million (ppm) or less of the wheat protein gluten. For those who suffer from Celiac's disease, gluten can trigger the body to attack the lining of the small intestine, causing issues with absorption of nutrients which can lead to serious health problems. Up until this ruling, there was no defined limit as to how much gluten may be present in a food in order to claim it is gluten free. This final ruling will allow for standardization across the food industry concerning gluten-free labeling and allow consumers to purchase gluten-free foods with more confidence of what they are buying. [Read the FDA's press release.](#)



Ask a Question

Need help finding the information you're looking for? [Submit your questions here.](#)

Request Evaluation

The Food Innovations Program offers food testing services to help ensure food safety and regulatory compliance for new food products entering the market. In addition, we can provide nutrition facts panels for your product's label.

[Request an evaluation](#)

Related Topics

- » [Food Safety](#)
- » [Nutrition & Wellness](#)
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Find your city or county's local office



Publications and Resources



Events and Calendars



Explore more Extension resources:



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- » [Virginia Agricultural Research and Extension Centers](#)
- » [Virginia Tech College of Natural](#)



Produce Safety Course for Direct
Marketers
*Offered by Extension Agents Across
the Commonwealth*



Agriculture

Community & Leadership

Natural Resources

Family

Food & Health

Lawn & Garden

4-H / Youth

Resources for On-Farm Food Safety

 Rss Feed

Title	Available As	Summary	Date	ID	A
Enhancing The Safety of Locally Grown Produce: Farm Self-Help Form	(PDF)		Jun 6, 2012	FST-35NP	
Enhancing The Safety of Locally Grown Produce: On the Farm	(PDF)		Jun 6, 2012	FST-36NP	
Enhancing The Safety of Locally Grown Produce: Land Use	(PDF)		Jun 6, 2012	FST-37NP	
Enhancing The Safety of Locally Grown Produce: Water Use	(PDF)		Jun 6, 2012	FST-38NP	
Enhancing The Safety of Locally Grown Produce: Manure Use	(PDF)		Jun 6, 2012	FST-39NP	
Enhancing The Safety of Locally Grown Produce: Farm	(PDF)		Jun 6, 2012	FST-40NP	



- Learn about foodborne illness and how to prevent it through best food safety practices
- Offered throughout commonwealth by Virginia Cooperative Extension Agents
- Offered on-line

Product Development Stages

- Idea Stage
- Development Stage
- **Consumer Testing Stage**
- **Packaging Stage**
- **Shelf-life Testing Stage**
- Final Production Stage
- Test Marketing Stage
- Commercialization Stage

Basics of Product Development:

Consumer Testing

- Neglected by small food processors
- Display products in small grocery stores/farmer's markets
- Shopper samples
 - ***Price sensitivity***
 - ***Product positioning***
 - ***Attributes***
 - ***Desired serving size***
 - ***Purchase intent and frequency***
- Actual sales after tasting can reinforce marketability

Basics of Product Development:

Packaging Stage

Packaging:

- Protects product
- Affects shelf-life
- Affects safety
- Brands product
- Helps sell product
 - Attracts customers
 - Tells your story



Packaging Pointers

- Choice of package hinges on purpose
 - **Protective barrier from air/water**
 - **Visual aspects (Visual window, graphics)**
 - **Protection from breakage**
 - **Purposes may have inverse relationships**
- Material greatly affects price
- Package choice greatly affects shelf-life and quality
 - Plastic versus glass

Basics of Product Development:

Shelf Life Determination

- Shelf life (Use by Date) is not a function of safety!
- Retain product from production batches for shelf-life observation
 - Hold at conditions as close to retail as possible
- Components
 - Microbiological
 - Chemical
 - Organoleptic (Sensory)
- Accelerated shelf-life testing may be appropriate but in no instance does it completely predict shelf-life performance

Product Development Stages

- Final Production Stage
 - Time to make product for retail sale!
- Test Marketing Stage
 - Introduce new product into a limited area
 - Distribute in stages to progressively larger areas (statewide, regional, national)
- Commercialization Stage
 - Sell to the institutional trade
 - Sell to retailers/wholesalers
 - Co-packing may be merited at this stage



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